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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

KANG, JULIANA K

ART UNIT PAPER NUMBER

2874

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/607,533

Applicant(s)

ITO, KEN

Examiner

Juliana K. Kang

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-10 and 13-16 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 11, 12, 17 and 18 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/27/03</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The disclosure is objected to because of the following informalities: in page 8 line 20, it appears that the figure number, Fig. 2, should be Fig. 6. Appropriate correction is required. Applicant's assistance is requested to correct any other errors that may be noticed in the application.

Claim Objections

3. Claims 5, 6, 11, 12 17 and 18 recite the limitation "the inner fiber" and "the outer fibers." There are insufficient antecedent bases for these limitations in the claims. Claim 13 recites the limitation "the video information" in lines 1 and 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

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applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3 and 7-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Fidric et al (U.S. Patent 6,434,302 B1).

Fidric et al disclose an apparatus comprising a plurality of laser sources (44, see Fig. 6), a group of fibers (20, 30s) including a plurality of fibers connected to each of the laser generators and a single core fiber (32, see Fig. 12A) connected to a fiber bundle including said plurality of fibers and having a larger core diameter than the fibers (see Fig. 12A), wherein said plurality of fibers have different directions (see Fig. 12A). The inner fiber (20, a single mode fiber), and the outer fibers (multimode fibers) are tapered (angled) toward the center providing different characteristics in accordance with the position connected.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4, 10 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fidric et al (U.S. Patent 6,434,302 B1) and further in view of Reynolds (U.S. Patent 3,825,336).

As described above Fidric et al disclose the claimed invention that the fiber bundle is three fibers for a red laser, a blue laser and a green laser and a display. Reynolds teaches using a fiber optic light mixing device employing three coherent bundles of optical fibers of red, blue, green lights in a television system is known in the art. Thus, it would have been obvious to one having ordinary skill in the art to Fidric et al's device in applications such as taught by Reynolds to provide improved coupling efficiency and the uniform power distribution.

Allowable Subject Matter

8. Claims 5, 6, 11, 12, 17 and 18 would be allowable if rewritten to overcome the objection(s), set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The Fidric et al (U.S. Patent 6,434,302 B1) reference does not teach or reasonably suggests the claimed method and apparatus with all the specific elements and the specific combinations including the inner fiber having a higher order of mode than the outer fibers and the inner fiber having a higher numerical aperture than the outer fibers. And there is no other prior art teaching that can be combined with the Fidric et al reference to perform the identical function in applicant's invention.


Conclusion

9. The prior art documents submitted by applicant have been considered and made of record (note the attached copy of form PTO-1449).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juliana K. Kang whose telephone number is (571) 272-2348. The examiner can normally be reached on Mon. & Fri. 10:00-6:00 and Tue. & Thur. 10:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Juliana Kang
November 30, 2004